# METHOD FOR PROGRAMMING SINGLE-BIT STORAGE SONOS TYPE MEMORY

## Abstract

A method for programming a single-bit storage nonvolatile memory cell includes the steps of: providing a single-bit storage nonvolatile memory cell having a channel region between a left bit line and a right bit line, a composite dielectric layer for storing digital data, and a word line overlying the composite dielectric layer; performing a left side electron injection on the single-bit storage nonvolatile memory cell by applying a relatively high word line voltage ($V_{WL, HIGH}$) to the word line, applying a relatively high left bit line voltage ($V_{LBL, HIGH}$) to the left bit line, and applying a relatively low right bit line voltage ($V_{RBL, LOW}$) to the right bit line; and performing a right side electron injection on the single-bit storage nonvolatile memory cell by applying the relatively high word line voltage ($V_{WL, HIGH}$) to the word line, applying a relatively low left bit line voltage ($V_{LBL, LOW}$) to the left bit line, and applying a relatively high right bit line voltage ($V_{RBL, HIGH}$) to the right bit line.